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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/035,327	01/04/2002	Olivier Rogerieux	103120-00029	2171

4372 7590 07/15/2004

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EXAMINER	
SIEFKE, SAMUEL P	

ART UNIT	PAPER NUMBER
1743	

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/035,327	ROGERIEUX ET AL.	
	Examiner	Art Unit	
	Samuel P Siefke	1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-12 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-12 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims **1-4,6-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Piepmeier (USPN 4,517,495) in view of Lucero et al. (USPN 3,904,849).

Piepmeier discloses a multi-electrode plasma source system. The system comprises an aqueous or liquid organic solution of sample material prepared and placed in a solution container (18) which solution is connected to a peristaltic pump (20) for delivery to a nebulizer (22) (fig. 1). Nebulizer (22) produces an aerosol stream of sample material entrained in argon gas. This stream is directed to source (1) through a connecting quartz tube (24, transparent) (col. 3, lines 29-43). In order to reduce sample aerosol condensation in connecting tube 24 heat may be applied to it. Heating coils made of nichrome wire may be wrapped around the tube 25 watts of power supplied.

This heating of the sample aerosol also reduces the plasma power requirements for heating and dissolving entrained sample droplets, if such heating is used, it should be turned on prior to transmission of the aerosol sample through tube 24 (col. 5, lines 35-47). The heating system described above includes a thermoregulation switch to turn the heating means on and off, without which would render the heating means useless. This also reads upon the system being thermoregulated.

Piepmeier does not teach a tray with tubes, control sensors for detecting and controlling the temperature within the system, along with an insulating means, keeping the temperature above 50°C.

Lucero teaches that temperature regulators and insulating means are known in the art to regulate temperatures. It would have been obvious to one having an ordinary skill in the art to modify Piepmeier to include a temperature sensor and controller for regulating the temperature of a system so that one could provide a system that has stable reaction conditions for a sample to be analyzed. Heating means or cooling means (cooling fans) without any type of regulator to regulate that heating means would provide a system with fluxing temperatures that lead to bad reaction conditions (col. 2, lines 54-68). With regards to the insulating means (Teflon sheathing), it would have been obvious to one having an ordinary skill in the art to provide an insulating means to a system that is trying to control a given temperature. Insulating means would reduce the temperature swings in a system (col. 2, lines 64-68). Regarding keeping the temperature above 50°C, it would have been obvious to do so because in order to reduce sample aerosol condensation in connecting tube 24 heating it would reduce this.

With regards to the system requiring a tray with tubes, it would have been obvious to modify Piepmeier to include a tray with tubes so that one could hold multiple samples in the tubes for testing multiple samples sequentially.

Claim **5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Piepmeier (USPN 4,517,495) in view of Lucero et al. (USPN 3,904,849) as applied to Claims 1-4, 6-12 above, and further in view of McGaffigan (USPN 5,087,804).

Piepmeier discloses a multi-electrode plasma source system as discussed above.

The modified Piepmeier does not teach the thermoregulated box is a delrin box. McGaffigan teaches that Delrin can be used as a receptacle holder. A holder device is typically made of or other nonconducting material. Delrin (plastic mold) is known in the art to be a nonconducting material and be used in applications where an electronic device needs to be in a holding device that is nonconductive (col. 8, lines 3-13). Therefore it would have been obvious to one having an ordinary skill in the art to modify the modified Piepmeier to put the thermoregulator in a Delrin box to prevent any heat transfer to surrounding devices.

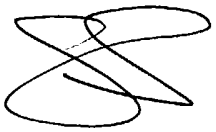
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samuel P Siefke whose telephone number is 571-272-1262. The examiner can normally be reached on M-F 7:00am-5:00pm.

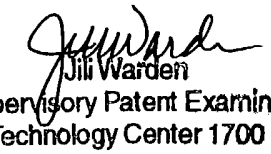
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 571-272-1700. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sam P. Siefke



June 28, 2004



Jill Warden
Supervisory Patent Examiner
Technology Center 1700